ABSTRACT

Centroid moments of components of an arm (220) are calculated based on three-dimensional model data and mass of the components, the centroid moments being combined to calculate a centroid position (G) of the entirety of the arm (220). The arm (220) is adjusted and swingably supported so that a stylus (222D) provided on an end of the arm (220) being swingably supported by a support (210) that moves relative to a workpiece (1) touches the workpiece (1) with a predetermined measuring force and the centroid position (G) is located on a horizontal plane including the fulcrum when the support (210) is inclined by an angle in the middle of an angle range within which the support (210) is rotated by a moving section (130). The measuring force is hardly fluctuated when the support (210) is inclined.